

CATS

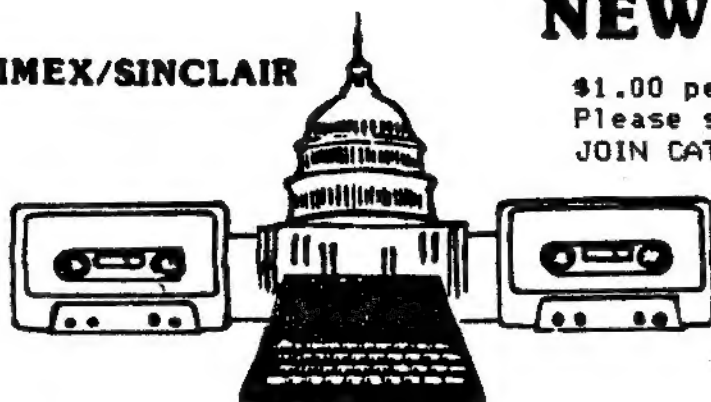
CAPITOL AREA TIMEX/SINCLAIR
USERS GROUP

NEWSLETTER

\$1.00 per copy
Please support your computer
JOIN CATS!

Volume 5, Number 1

April 1987



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LOOKING TO THE FUTURE

2nd Annual T/S Computerfest
May 2-3
Indianapolis, IN

12th Annual Trenton Computerfest
April 11-12
Trenton State College
Trenton, NJ

PRESIDENTIAL RAMBLINGS

The Indianapolis Computerfest is upon us, as is the Trenton Hamfest. The Trenton fest is the weekend of our April meeting. There will be a Timex Sinclair session on Sunday afternoon.

The Indianapolis meeting is the first weekend in May. There has been some discussion of a car or vanpool to go out there on Friday. It is an all day drive. Speaking from experience, I can say that everyone will have a good time. Why not think about making a weekend of it.

The value of a user group, such as CATS, simply can't be assessed. Even between the last meeting and this one, the group has exercised its muscle and purchased many disk interfaces and 512K ram boards for the recently purchased QL's. The group discount is about 15%. The disk interfaces are \$114.95 and ram boards are \$133.95. At this writing 9 rams are paid for and 4 disks are paid

for. However, there is still time to get in on the action. I have received several calls from out of town to get in on this buy.

Please take advantage of your group. We are here for you (and us). Come on down to the New Carrollton Library and see for yourself!!

This meeting will have a variety of demos as usual. True multitasking can now be done on the QL by using QRAM or Taskmaster. We will demo both.

I have received about 30 QL motherboards, but some of them are missing chips. Those chips that are missing are in transit from England. They will hopefully be here before the meeting. The price of each board really won't be known until they get here, but they should be in the \$20 to \$35 price range. Hopefully they will be in the lower end. I have also received 15 working microdrives for the QL. They are \$25 each and are available if any member blows one.

EDITOR'S CORNER

The first issue of the fifth volume of CATS' newsletter brings some changes! First of all, after four years of hard labor as editors of the newsletter, Mark and Sarah Fisher are taking a well-earned rest and have passed the torch over to me. They have created a tradition of excellence that we can all be proud of, making our monthly publication one of the finest in the U.S. Sinclair community, and I intend to maintain that standard and try to build upon it.

As always, of prime importance is your support, not only through subscribing to the newsletter, but by contributing to it. I am ready to receive your submissions in a

number of ways; on QL's Quill (microdrive cartridge or disk), or on the 2068's Mscript or Textwriter 2000 (cassette or Aerco disk), or in "hard copy" form, preferably 35 columns wide. If you see something interesting in a newspaper, magazine, or newsletter that concerns our machines, clip it out and mail it to me. Programs, articles, software and hardware reviews, humor --- I want it all! Don't worry about it if you are afraid that you don't "write well", fixing grammar is what editors are for! Just do your best, and I will polish your prose for you.

Currently I am looking for a person who will do a regular monthly column for each of the Sinclair machines (QL, 2068, & 1000). How about it? Anybody out there interested? Talk to me at (301)674-8560, or write me at 1316 Farrara Dr., Odenton, Maryland 21113.

John Riley

SPECTRUM DISASSEMBLY

8800 00	NOP	8849 5F	LD B,A	8897 00	NOP
8801 3E18	LD A,18	884A 1600	LD B,00	8898 05	ADD A,L
8803 CDB15B	CALL 5BB1	884C 19	ADD HL,DE	8899 02	ADD A,D
8805 3E17	LD A,17	884D 0603	LD B,03	889A 05	ADD A,L
8808 CDB15B	CALL 5BB1	884F 7E	LD A,(HL)	889B 00	NOP
880B 3E18	LD A,18	8850 CDB15B	CALL 5BB1	889C 06	ADD A,(HL)
880D CDB15B	CALL 5BB1	8853 23	INC HL	889D 00	ADD A,B
8810 3E5B	LD A,5B	8854 10F9	DUNZ,5B4F	889E 06	ADD A,(HL)
8812 CDB15B	CALL 5BB1	8856 01	POP BC	889F 00	NOP
8815 3E03	LD A,03	8857 04	INC B	88A0 04	ADD A,H
8817 CDB15B	CALL 5BB1	8858 78	LD A,B	88A1 02	ADD A,D
881A 3E12	LD A,12	8859 FE00	CP C0	88A2 01	ADD A,C
881C CDB15B	CALL 5BB1	885B 38C7	JR C,8824	88A3 00	NOP
881F 00	NOP	885D 00	NOP	88A4 02	ADD A,D
8820 0E00	LD C,00	885E 00	NOP	88A5 00	ADD A,B
8822 0600	LD B,00	885F 3E1E	LD A,1E	88A6 02	ADD A,D
8824 05	PUSH BC	8861 CDB15B	CALL 5BB1	88A7 00	NOP
8825 CDB05B	CALL 5B6D	8864 3E0D	LD A,0D	88A8 00	ADD A,B
8828 47	LD B,A	8866 CDB15B	CALL 5BB1	88A9 02	ADD A,D
8829 04	INC B	8869 3E12	LD A,12	88AA 00	ADD A,B
882B 3E01	LD A,01	886B CDB15B	CALL 5BB1	88AB 00	NOP
882C 0F	RRC A	886E 0C	INC C	88AC 00	ADD A,B
882D 10FD	DUNZ,5B2C	886F 20B1	JR NZ,5B22	88AD 00	ADD A,B
882F A6	AND (HL)	8871 3E1E	LD A,1E	88AE 00	ADD A,B
8830 08	EX AF,AF	8873 CDB15B	CALL 5BB1	88AF 00	NOP
8831 7C	LD A,H	8876 3E1B	LD A,1B	88B0 00	NOP
8832 0F	RRC A	8878 CDB15B	CALL 5BB1	88B1 F5	PUSH AF
8833 0F	RRC A	887B 3E5B	LD A,5B	88B2 DB7F	IN A,(7F)
8834 0F	RRC A	887D CDB15B	CALL 5BB1	88B4 CB67	BIT 4,A
8835 E603	AND 03	8880 3E0C	LD A,0C	88B5 20FA	JR NZ,5B62
8837 F658	OR 58	8882 CDB15B	CALL 5BB1	88B6 F1	POP AF
8839 67	LD H,A	8885 3E1B	LD A,1B	88B9 D37F	OUT (7F),A
883A 46	LD B,(HL)	8887 CDB15B	CALL 5BB1	88BB C9	RET
883B 08	EX AF,AF	888A 3E13	LD A,13	88BC 00	NOP
883C 78	LD A,B	888C CDB15B	CALL 5BB1	88BD 3E8F	LD A,8F
883D 2003	JR NZ,5B42	888F 09	RET	88BF 90	SUB B
883F 0F	RRC A	8890 67	ADD A,A	88C0 DAF924	JP C,24F9
8840 0F	RRC A	8891 67	ADD A,A	88C3 CDB022	CALL 2200
8841 0F	RRC A	8892 67	ADD A,A	88C6 C9	RET
8842 E607	AND 07	8893 00	NOP	88C7 00	NOP
8844 21905B	LD HL,5B90	8894 83	ADD A,E	88C8 00	NOP
8847 87	ADD A,A	8895 86	ADD A,(HL)	88C9 00	NOP
8848 87	ADD A,A	8896 83	ADD A,E		

SCREEN* DUMP SOFTWARE FOR THE (RADIO SHACK) TANDY 105 PRINTER

For over a year and a half I have been using the TANDY 105 printer for all my personal and business printing duties and have found the unit to be extremely reliable and an excellent value for the thrifty (cheap) TIMEX COMPUTER owner. The printer can be purchased for around \$200 (Canadian) on sale and I imagine a lot less in the States. Any RADIO SHACK store carries replacement ribbons and can help if repairs are required. The unit comes with PARALLEL and SERIAL Interfaces (the SERIAL Interface should work directly with the QL and I hope to test this as soon as I build my QL kit) making the printer very flexable.

The only problem I had with the unit is it's strange GRAPHICS MODE. The printer does graphics with only seven of the eight pins and requires the bit pattern to be flipped and have bit 7 set. Because of this strange setup getting SCREEN* dumps to the printer ment writing my own screen dump program.

The following program is a modified SPECTRUM program originally printed in "YOUR SINCLAIR" magazine. The result is a full 8 1/2" * 11" sideways screen dump that reproduces colors as different shades of gray (see sample print out). The code is 200 bites long and sits in the printer buffer so will not take any RAM used by other programs. I required the program to work in SPECTRUM and 2068 mode so I have enclosed both disassemblies (I use Ray Kingsley's HOT Z-AROS). Please note that the disassemblies are located at 8B00h and not from the printer buffer location 5B00h - trying to print the disassembly from the printer buffer location to the 2040 printer would cause the code to be losted and nothing printed. Load the code using HOT Z or any other assembler into location 5B00h and save to disk or tape. Use a BASIC loader program to load the code into the printer buffer location and when you want to print a screen call it with "RND USR 23296".

I think the TANDY 105 printer is great value for the money and with this utility you can make it even more usefull.

2068 DISASSEMBLY

DAN PINHO

8B00 00	NOP	8B49 5F	LD E,A	8B87 00	NOP
8B01 3E15	LD A,15	8B4A 1600	LD D,00	8B88 85	ADD A,L
8B02 C0B15B	CALL 5B81	8B4B 19	ADD HL,DE	8B89 82	ADD A,D
8B03 3E17	LD A,17	8B4C 0603	LD B,03	8B8A 85	ADD A,L
8B04 C0B15B	CALL 5B81	8B4D 7E	LD A,(HL)	8B8B 00	NOP
8B05 3E18	LD A,18	8B4E C0B15B	CALL 5B81	8B8C 86	ADD A,(HL)
8B06 C0B15B	CALL 5B81	8B4F 23	INC HL	8B8D 80	ADD A,B
8B07 3E58	LD A,58	8B50 10F5	DJNZ,8B4F	8B8E 85	ADD A,(HL)
8B08 C0B15B	CALL 5B81	8B51 C1	POP BC	8B8F 00	NOP
8B09 3E03	LD A,03	8B52 04	INC B	8B90 84	ADD A,H
8B0A C0B15B	CALL 5B81	8B53 78	LD A,B	8B91 82	ADD A,D
8B0B 3E12	LD A,12	8B54 FEC0	CP C0	8B92 81	ADD A,C
8B0C C0B15B	CALL 5B81	8B55 38C7	JR C,8B24	8B93 00	NOP
8B0D 00	NOP	8B56 00	NOP	8B94 82	ADD A,D
8B0E 0E00	LD C,00	8B57 00	NOP	8B95 80	ADD A,B
8B0F 0600	LD B,00	8B58 3E1E	LD A,1E	8B96 82	ADD A,D
8B10 C5	PUSH BC	8B59 C0B15B	CALL 5B81	8B97 00	NOP
8B11 C0B05B	CALL 5B8D	8B5A 3E00	LD A,00	8B98 80	ADD A,B
8B12 47	LD B,A	8B5B C0B15B	CALL 5B81	8B99 82	ADD A,D
8B13 04	INC B	8B5C 3E12	LD A,12	8B9A 80	ADD A,B
8B14 3E01	LD A,01	8B5D C0B15B	CALL 5B81	8B9B 00	NOP
8B15 0F	RARC	8B5E 0C	INC C	8B9C 80	ADD A,B
8B16 10FD	DJNZ,8B2C	8B5F 20B1	JR NZ,8B22	8B9D 80	ADD A,B
8B17 05	AND (HL)	8B60 3E1E	LD A,1E	8B9E 80	ADD A,B
8B18 7C	EX AF,AF'	8B61 C0B15B	CALL 5B81	8B9F 00	NOP
8B19 0F	LD A,H	8B62 3E1B	LD A,1B	8BA0 00	NOP
8B1A 0F	RARC	8B63 C0B15B	CALL 5B81	8BA1 F5	PUSH AF
8B1B 0F	RARC	8B64 3E5B	LD A,5B	8BA2 DB7F	IN A,(7F)
8B1C 0F	RARC	8B65 C0B15B	CALL 5B81	8BA3 CB67	BIT 4,A
8B1D 03	AND 03	8B66 3E0C	LD A,0C	8BA4 20FA	JR NZ,8B82
8B1E 05	OR 05	8B67 3E18	LD A,18	8BA5 F1	POP AF
8B1F 07	LD H,A	8B68 C0B15B	CALL 5B81	8BA6 D37F	OUT (7F),A
8B20 46	LD B,(HL)	8B69 3E13	LD A,13	8BA7 00	RET
8B21 06	EX AF,AF'	8B6A C0B15B	CALL 5B81	8BA8 00	NOP
8B22 78	LD A,B	8B6B 09	RET	8BA9 8F	LD A,BF
8B23 2003	JR NZ,8B42	8B6C 07	ADD A,A	8BAF 90	SUB B
8B24 0F	RARC	8B6D 07	ADD A,A	8BB0 DA5228	JP C,2852
8B25 0F	RARC	8B6E 07	ADD A,A	8BB1 C00926	CALL 2609
8B26 0F	RARC	8B6F 00	NOP	8BB2 C9	RET
8B27 07	AND 07	8B70 83	ADD A,E	8BB3 00	NOP
8B28 21905B	LD HL,5B90	8B71 86	ADD A,(HL)	8BB4 00	NOP
8B29 07	ADD A,A	8B72 83	ADD A,E		
8B2A 07	ADD A,A				

INTRODUCING VOLUMES SIX AND SEVEN IN THE 2068 SOFTWARE LIBRARY

After several months of collecting new software from contributors across the country, here are the latest additions to the 2068 library! The sixth volume is a "mixed bag" for the 2068, containing something for everyone. The seventh volume is a Spectrum-only collection, requiring a Romswitch or other Spectrum emulation to work. But enough of this preamble, let's get on to the program descriptions.....

Volume Six --- Mixed Bag

MTOS (utility) - This is a program development tool that can come in handy for anyone who is creating a new program or modifying an old one. For a fuller description see the letter later in this newsletter by its author, CATS member T.O. Morley. It is available to CATS members only by special arrangement with Mr. Morley, but non-members can purchase through Sharp's of VA.

TEXTYPE (word processor) - A nice little program that lets you print out your hardcopy in any of four different typesstyles (regular, bold, modern, or italic) if you use a 2040 printer. With a little creative wangling it can be adapted to print out to an 80-column printer, too.

3D WORD (graphics) - Creates 3d words out of little box-girder-like udgs for use in article titles, etc. Look for an example in one of the headlines in this issue.

3D DRAW (graphics) - a program which will, if you learn its quirks, draw for you a wide variety of 3d objects on an x-y grid. Its fun to watch.

CURSOR (demo) - Will teach you how to put other symbols inside the 2068 flashing cursor.

DUB (utility) - IF you have a good pair of tape recorders and IF you get the volumes adjusted right, this program will PERFECTLY COPY most any program by reading the signal coming into the EAR port, cleaning it up, and feeding it directly out through the MIC port. This could be the answer to the prayers of those of you having trouble making archival copies of your programs!

ANIMATE (demo) - Shows how you can use BASIC to give life to a spritely (pun!) little marching man.

FILL (demo) - Fills cursor-selected spaces with color, pixel by pixel. Rather slow, but there is a lot to learn from examining the listing.

BLOKMAN (game) - a slightly watered down version of the Spectrum game that was included in Volume 4, this time for the 2068. Joystick in left port.

PACMAN (game) - It had to happen sooner or later! This version would be exciting to persons 6 years and younger. Use arrow keys.

BELLTOWER (game) - Now this one is pretty tough! A variation on the platforms and ladders type of game. It contains a very nice user-programmable keys function which could come in handy in your own programs.

GHOTI (game) - You are a fish, eating bubbles and avoiding hungry turtles to survive. Use arrow keys.

ARTIC EXPLORER (game) - Avoid the pitfalls and win through to the North Pole. Controls: O=Left, P=Right, O+CS (capshift)=Jump Left, P+CS=Jump Right.

PAWS (game) - You are a cat. Eat the mice but avoid the rats. Use RIGHT joystick port.

WAGONERS (game) - A faster-than-the-speed-of-snails race between three wagons. You bet on the outcome.

CURSOR ADVENTURE (text adventure) - Hey! Our first text adventure!

WORDSSQUARE (game) - a hidden-word puzzle generator, with less capacity than the one found in Volume One, but faster in producing the result.

ADVERTISING DISPLAY (utility) - Large letters flow from right to left across the screen in an unending loop. You can input the message that the letters spell out. A Spectrum version is in Volume Seven.

SPANISH TUTOR (educational) - A "99% complete" version of the program that was included in Volume 2.

SPANISH BUILDER I (educational) - Vocabulary practice for what you learned from SPANISH TUTOR.

SPANISH BUILDER II (educational) - More vocabulary practice!

VOLUME SEVEN - MORE SPECTRUM SOFTWARE

WAR OF THE SHIRES (adventure game) - This text-and-graphics adventure is a sort of poor man's War in the East. You can manipulate several characters and their armies to try and defeat the enemy. Well done and a challenge to play.

KRAKATOA 2012 (game) - The Krakatoa volcano is about to blow up again, because some nasty aliens have been fooling with it. Your mission - rescue the islanders and destroy the aliens. Use arrow keys.

RIFLE RANGE (game) - A shooting gallery game. This one is popular with children. Use any key to fire the rifle.

SCROLLS (utility) - Does a very fast vertical scroll within a defined window on the screen.

SCROLL (utility) - Another type of scroll that "creeps" a block of text across the screen.

CAPMAN (game) - The Spectrum version of Pacman. Written in machine code, it is much faster than the 2048 version.

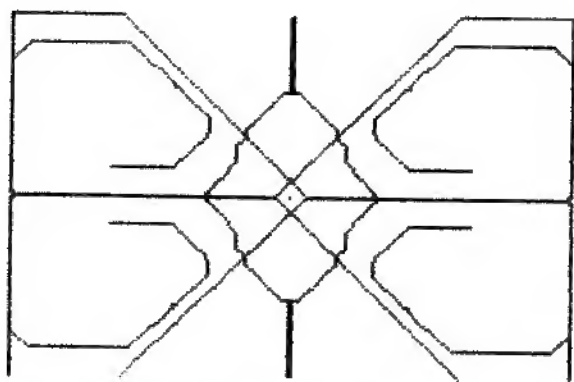
ADVERTISING DISPLAY (utility) - Same as the program of the same name described in Volume Six.

CLONE (utility) - This is a GREAT UTILITY!! It is similar to the clone utilities on the QL, in that it loads in the program to be cloned a section at a time, then prompts you to put in a fresh tape and save that section. The only programs that balk it are the ones that I can't crack either.

SPECTRAMONITOR (utility) - a nicely done disassembler with mnemonics for the Spectrum.

FORTH (language) - An implementation of forth, for those interested in learning it. The command "DLIST" will list the dictionary that you have to work with.

Members of CATS can get a copy of the new software by sending \$2.00 to John Riley, 1316 Farrara Dr., Odenton, Maryland 21113. The money covers the cost of the tape and mailing. Non-members can receive CATS software via swapping other public domain programs that we do not yet have. For details and a full listing of the 2048 library send a large SASE to the above address.



A=ARC F=FRAME C=CPY S=SUPERFILE
M=MAGNIFY P=PAPER I=INK 1&2=MENU

Drawn using "Grafixx" from the CATS 2068 software library. Artwork by Abe Riley, age 6.

Q (L) TIPS

Are you getting flooded out by those fiddly little microdrive cartridges that don't seem to fit in anything nicely? Do you dislike the "wallets"? Well, here are a couple of alternatives for you. #1- break out the sprocket tabs from a plastic cassette case, and you will have a transparent carrying case for 3 cartridges. Note: sometimes you have to put a rubber band around the case to keep it closed. #2- Paul Bingham recently suggested in Quantum Levels that you could take several cassette cases apart, glue the transparent sections together in stairstep fashion, and create a storage rack that would hold 3 cartridges on each level. #3- Go to an office supply store and buy a business card box for about \$4. This box will hold 30 cartridges standing on end, and has a see-through top so that you can read the contents at a glance.

"But", you say, "I'm going crazy cutting little fiddly pieces of tape to label the ends of my little fiddly cartridges!" No problem. While you are at the office supply store buying your business card box, hop over to the typewriter supplies and buy some 1/6" cover-up strips, made by Avery and supplied in sheets or rolls. They just happen to exactly fit the indentation at the end of the cartridge.

A NOVELTY TS 2048

An interesting and rather "pretty" bug exists in the way the DRAW command executes its arc-making facility.

Try this short routine:

```
10 INPUT "Any odd number";n
15 CLS
20 PLOT 75,50:DRAW 100,100,PI *n
30 GOTO 10
```

Having RUN this program, try adding the following line. 5 OVER 1

Try inputting these numbers: 253, 237, 375, 287, 157, and EXPERIMENT!!

From the L.I.S.T. newsletter

Digital Imagizing - Part I

By Eric Michaud

Have you ever wanted to have some REAL pictures for your 2068? I don't mean your usual pictures from your typical drawing programs but real pictures, such as your face, for example. This tutorial will show you how to hook up a video camera to your 2068 with a fairly simple hardware attachment.

I chose to wire-wrap my prototype and it worked fine but be sure to keep wires as short as possible in the op-amp section of the circuit. My version lies in the cartridge port but it would be easy enough to transfer to the rear connector if desired. Other than that I will leave the actual construction up to you.

The circuit can be divided into two parts. The interface and the digitizing circuitry. The interface section simply provides 8 inputs and 8 outputs. Only 4 outputs are actually used along with 2 inputs. The extra lines could be used for your own projects. I chose to map the interface to IO port 00 but this could easily be changed to another port if it interferes with another piece of hardware. Small software changes would have to be made to accomodate for this change. The digitizing section of the circuit essentially separates the video sync signal and the actual picture data from your video source and by use of the LM311's, the picture is converted to a digital format. Then through timing accomplished by the 74LS74N and the LM555, the picture is sampled at appropriate times to collect the image.

It is important to note that you must have a still video source as it takes 5 seconds to collect one image. Also, your video source must be capable of driving a monitor. RF video such as from a ZX81 will NOT work. A VCR or video camera with a MONITOR OUT jack will work. For testing purposes, I recommend another computer with a monitor output plug or a VCR with shake-free freeze frame. There are three controls on the digitizer. The BRIGHTNESS knob sets the brightness of the image. The STRETCH knob allows you to horizontally expand or compress the image. Finally the SYNC knob is used to place yourself 'in sync' with the incoming video source.

I will leave you with the schematic for now and in the next article, setup, theory and use will be discussed. In the meantime, I suggest that you obtain the driver software from the club library. The program is called EyByNi.B1.



DIGITIZED PICTURES BY DAN PINHO

This article from Sinc-Link, the newsletter of the Toronto T/S User's Club.

Vu-Calc

AS PETTY CASH

Our own Akin Olowofoyeku has been working on a number of interesting applications for the 2068's VuCalc. If you like this one, be happy! There are several more yet to come. How about the rest of you? Do you have some unique uses for VuCalc that you can share? Or how about some Archive applications from you QL users? Send them in, the editor is hungry for material!

Anyway, here is Akin's use of VuCalc as a petty cash register.

Location: Instruction

a1: #f,a,1
f1: "=====
f2: #r,f1,f2:f12
f14: #r,f1,f14:f18
e5: "PETTY CASH
e7: "REGISTER
e12: #f,12,r
e12: "1986 (or current year)
e15: "EXPENSE REGISTER
g1: "VOUCH#
g2: "DATE
g3: "CODE
g4: "DESCRIPTION
g8: "PAYMENT
g10: "RECEIPT
g12: "BALANCE
g14: "POSTAGE
g16: "DELIVERY
g18: "MISC.
h4: "BALANCE FORWARD
i3: #f,3,1,1
i3: 0
j3: #r,i3,j3:av3
i8: #f,8,\$,r
i8: 0
j8: #r,i8,j8:av8
i10: #f,10,\$,r
i10: 0
j10: #r,i10,j10:av10
h12: #f,12,\$,r
h12: 0

Location: Instruction

i12: h12+i10-i8
j12: #r,i12,j12:av12
aw1: "=====
aw2: #r,aw1,aw2:aw12
aw14: #r,aw1,aw14:aw18
ax6: "TOTALS
ax8: &i8:av8
ax10: &i10:av10
ax12: av12
i14: #f,14,\$,r
i14: (i3=1)&i8
j14: #r,i14,j14:av14
f14: "1
i16: #f,16,\$,r
i16: (i3=2)&i8
j16: #r,i16,j16:av16
f16: "2
i18: #f,18,\$,r
i18: (i3=3)&i8
j18: #r,i18,j18:av18
f18: "3
ax14: &i14:av14
ax16: &i16:av16
ax18: &i18:av18
a1: "Petty Cash Journal >#g,g1
b1: "Expense Record >#g,e14
d1: "Save,&s :Load,&l :Print,&q
e1: "Petty Cash Check Code=0
a6: "AKO ENTERPRISES
b6: "1613 DAYTON ROAD
c6: "ADELPHI, MD 20783

Petty Cash Journal >#g,g1

Expense Record >#g,e14

AKO ENTERPRISES

1613 DAYTON ROAD

ADELPHI, MD 20783

Save,&s :Load,&l :Print,&q

Petty Cash Check Code=0

PETTY CASH

REGISTER

1986

EXPENSE REGISTER

VOUCH#	DATE	CODE	DESCRIPTION	PAYMENT	RECEIPT	BALANCE	POSTAGE	DELIVERY	MISC.
			BALANCE FORWARD			0.00	1	2	3
500	1:1	0	Established Fund	0.00	100.00	100.00	0.00	0.00	0.00
100	1:2	1	Postage for sales	8.00	0.00	92.00	8.00	0.00	0.00
101	1:4	1	Telegraph	8.00	0.00	84.00	8.00	0.00	0.00
102	1:8	2	Taxi fare	10.00	0.00	74.00	0.00	10.00	0.00
103	1:10	3	Coffee for Q/T	4.00	0.00	70.00	0.00	0.00	4.00
104	1:15	1	Stamps	18.00	0.00	52.00	18.00	0.00	0.00
105	1:26	3	Window cleaning	12.00	0.00	40.00	0.00	0.00	12.00
		0		0.00	0.00	40.00	0.00	0.00	0.00
501	2:1	0	Replenished Fund	0.00	60.00	100.00	0.00	0.00	0.00
		0		0.00	0.00	100.00	0.00	0.00	0.00
0				0.00	0.00	100.00	0.00	0.00	0.00
TOTALS				60.00	160.00		34.00	10.00	16.00

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MTOS, A 2068 UTILITY

Dear Mr. Riley:

...Here is a short writeup of MTOS and it's use. The program is generally self-explanatory and really has only one use.

The programs that were on the menu in MTOS were included simply to show it's use; however, I believe all of them are self-explanatory or are user-friendly. If you'd like to include my name and address feel free to do so (2217 E. Riverside Dr., Truth or Consequences, NM 87901). I will be happy to help anyone who writes.

Sincerely,
T.G. Morley

MTOS is a self-modifying program that will add a newly entered or loaded program to its menu, without worrying about changing line numbers.

In the beginning I needed several programs to help in constructing a Basic program. I got tired of loading a tape every time I needed help and MTOS is the result.

The working program is line #1 thru 216 and 9997 thru 9999.

Any alteration of these lines will destroy the program. With your imagination though I'm sure that you can improve upon it.

MTOS can also be used as a "library shelf" to hold several games or perhaps a disassembler and a monitor and assembler.

This sounds like a winner; how about a program in which it is necessary to consult pages of data or graphs in any order at any time? Punch up the menu, call the correct data or graph, and go back to the original program with the information that you need.

The instructions are simple:

- 1..to load or enter code select "merge" on the menu. Most of your work is done from "merge".
- 2..while you are in "merge" you

may work on the program as if it were the only one in the machine.

3..after the merge is completed you can call up other utilities and still bring up the last program on the meny to work on.

4..to delete a program or group of programs call up the lowest, then (DELETE, 9996 ENTER) and (GOTO 9998 ENTER).

5..to change the last meny entry (GOTO 9998 ENTER) and enter a name as long or longer.

6..(SHIFT BREAK) will goto menu, holding (SHIFT BREAK) will break to Basic.

7..the rest is up to your imagination -- enjoy!

8..CATS members only may use this copy of MTOS without copyright infringement.

THE NEW YORK TIMES,

WEDNESDAY, FEBRUARY 18, 1987

New Sinclair Computer Set

LONDON, Feb. 17 (Reuters) — Sir Clive Sinclair, the British inventor who was forced to sell his computer empire after it fell on hard times last year, today introduced what he said was the world's smallest and most portable personal computer.

Described as the "first portable with full personal computer facilities," Sir Clive's new Z88 weighs less than 2 pounds, measures 11½ by 8¼ inches and has a memory capable of storing the entire works of Shakespeare.

Introduced at a computer exhibition in Birmingham, England, the I.B.M.-compatible machine sells for \$350 — at least two-thirds cheaper than many of its competitors. Sir Clive, whose disastrous venture into electric cars with his miniature C5 tricycle failed to catch the public's imagination, sold his previous computer company and even the Sinclair name to a rival computer maker, Amstrad, last year for \$7.7 million.

By: **N.A. Pashtoon**

The prices in the tables is based on the vendor brochures supplied to me mostly before X-mas. As such some of the prices may only be X-mas specials, in other words it is a good idea to check with the vendors first. The price calculations shown are just for reference, and they were prepared by rounding up the prices shown in the vendor brochures. Don't forget that these prices are just the prices shown in the brochures. They were planning to buy three more than the last word. By this I mean, suppose that you were planning to buy three or four items for your computer, you can call any of the listed vendors, and probably work out a special deal. If you are in the market for purchasing disk drives for your computer, I suggest that you exercise caution. The prices advertised by Q1 vendors may not be the lowest. To give you an example the Amdek 3" 5 1/4" cased dual drives with power supply is advertised by some TIMEX vendors for a price of close to \$250.00. The same exact product is available for \$75.00 from

Peripherals Direct Ltd.
P.O. Box 4301
Northbrook, Ill. 60065
312-498-9244

If you are concerned about the availability of the 3rd diskettes, there is no reason to worry. Any of your local SEARS stores can supply the diskettes.

Finally, the translation under books for the QL, I have listed the titles and prices from Quantum Computing. All the other vendors carry some of these titles, and some times at lower prices, than Quantum Computing. I visited Quantum Computing and spent a few hours with Frank Tounney, the owner. He is knowledgeable, TS enthusiast, and a professional programmer. I was surprised to find a powered up TS1500 in his basement, as well as a TS2068. Any how, I discovered that even though his brochures advertise all these titles for the QL, he actually had only six or seven titles in stock. The moral is, before ordering, make sure that the vendor has the item you need in stock. If the item is not in stock, it will probably take a couple of months for the vendor to get it from England. Don't forget, that you can also order any of the QL stuff directly from England, using plastic, probably faster and even save some money in the process. I do like to apologize in advance if there are any transcription errors in the tables.

A) Quantum Levels

A) Quantum Levels
Quantum Levels is the only QI-specific U.S. Based publication. Member Tom Bent is the editor. I had a chance to talk with him on the phone a few times. He was very pleasant, knowledgeable, and helpful. He sent me the first two issues of Quantum Levels as samples. The bi-monthly publication caters to the need of both beginners as well as advanced users. Since up to now three issues need of both beginners as well as advanced users. Since up to now three issues need of both beginners as well as advanced users. Since up to now three issues

Quantum Levels
P.O. Box 64
Jefferson, N.H. 03451

B) Of. World

B) QL World is the only British magazine specifically dedicated to the QL. It seems not to be plagued (yet!) with all the juvenile nonsense that other Sinclair related British magazines. The articles are generally informative and do cater to the needs of beginners, advanced programmers, as well as hardware types. The yearly subscription can be arranged in the £30 to £40 range by any of the dealers. I am mentioning this, because if you deal directly with QL World you might be short say around \$60. (By the way why I do I get the distinct feeling that most of the British suppliers think of North Americans as suckers? Why do they always have much higher rates for North America???)

A) Best Buy

The Best Buy in monitors (if you can find it in your local area) is the TAYAN B210 RGB (analog) monitor. It is priced from \$100 to \$180. In my area, the Child World in Seidens had it. I have also seen it some places in NYC. The TAYAN B210 RGB monitor is not serious. The colors are very nice, but I have been having some problems with the monitor for a while. I have been overcompensating problem on this monitor for two years, and I am very happy with it. I have used the unit with my T520088 for two years, and it has been manufactured by TAYAN. Note that the Monitor which was sold by Sinclear was also manufactured by TAYAN. Note that this is an analog RGB monitor. To make it compatible with the TTL RGB from your computer, all you need is these 393 Ohms resistors (1/8 watt will do), which you will insert in series with the R, G, and B lines coming out of your computer. I installed these resistors inside the DIN connector. If you don't install the resistors you will be inside the DIN connector, which may not be good for its long term health.

B) Commodore 1302 The 1302 except for the front bezel which is different, is exactly the same monitor as the Magnavox unit so highly touted by some QLT vendors. It does have some extra features like comb filter and extra inputs. The list price is \$230 higher than the Magnavox. Before you buy it though, take your computer to one of the dealers. Make sure that you are happy with the display. Since this monitor is widely available I am sure you will be able to get some good prices on it.

C) **High priced monitors**
I had a chance to test the QL with some expensive monitors such as the NEC Multisynch, Princeton Graphics HXL2, and the Commodore Monitor accompanying the Amiga Computer. It is hard to convey the high quality, very distinct image on these wide bandwidth monitors. The NEC Multisynch did not even require any adjustments. There was just no over scanning.

A) Repairs

A) repairs
In warranty repairs are provided by A+ Computers Out of warranty repairs are also provided. You better call them up and talk with their Technical Person. He is available for consultation weekdays from 3:00 to 6:00 p.m.(EST). The experience of LIST members show that the people at A+ are very courteous. I don't see users having any problem dealing with them. If you are in the United States, please call them in the U.S. If you are in England, You can find the ad

B) BASIC Program Transfers
If you need to transfer your long BASIC programs from your TS2008 to Spectrum QL, and you hate to type, send a copy of the tape to our Programmer Gene, and he will perform the service for you for a nominal fee.

Eugene Pererva
358 Railroad Ave.
Bridgeport, CT 06604

A)QUANTA is the newsletter of the Independent QL Users Group (IQLUG), published in Britain for the last three years. The format of the newsletter is as letters to the editor. A typical issue has more than 30 pages of some excellent material. More importantly the group has built up a significant public domain library (> 6 MBbytes), which can probably answer the needs of most any user. The Library representative in the U.S. is member Tom Bent. For membership and other info

Brian Pain
24 Oxford Street
Stony Stratford
Milton Keynes

B) North American User Groups

A network of the 35-40 User Groups in North America are supporting the T/S line of computers. Many of these have newsletters, which publish material provided by any of their members. For example here at LIST we would like to support the QL starting with this issue. At this point in time more than 30% of our members own a QL. As the learning curve of our members goes up we will be providing both software and hardware support. For the last few months we have noticed that ZXAppeal (Vancouver Sinclair Users Group) have published some nice stuff about QL. This is a very good newsletter, which seems to be leapingfrogging from ZX81 to QL. The last few issues of RAMPTOP has also carried a column about QL. SINC_LINC, a Toronto TINES-Sinclair Users Club publication is another good quality newsletter which has carried material on the QL to the past. It is worth mentioning that SINC_LINC is the only newsletter which provides regular coverage on the Larkden Disk Interface for the ZX81 and the

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Vendor Addresses

In the product directories presents the last few pages, the vendors were designated by alphabetical characters. In what to follow the alphabetical designation of each vendor, as well as their addresses and phone numbers are provided.

A QUANTUM COMPUTING
P.O. BOX 1280
DOVER, N.J. 07801
201-328-8840

B Sharp's Inc.
Rt. 10, Box 459
Mechanicsville, Va. 23111
804-740-1664 (9:00 am-4:30pm)
804-730-9097 (5:00pm-11:00pm EST)
Visa & MC accepted

C Variety Sales
325 West Jersey St. (2-D)
Elizabeth, N.J. 07202
201-289-5696

D C.W. Associates
419 N. Johnson Street
Ada, Ohio 45810
419-634-4874

Hardware

	A	B	C	D	E	F	G	H
250 K Mem. Exp.	call	\$165	\$190	\$185	\$230		\$170	\$200
412 K Mem. Exp.			\$220				\$220	
"Q+" Exp. Chase							\$374	
QL Hard Disk							Call	
Memodisk (512K-Disk & Centronics I/F)		\$260						
Multics I/F Board	\$267	\$125	\$165	\$130	\$160		\$180	\$180
Centronics Disk I/F	\$125		\$180	\$190	\$295		\$150	\$150
Disk Disk I/F							\$210	\$210
"Q+" 128K							\$200	\$200
Eastway Disk I/F							\$40	\$40
Dual 5" Disk Drive								
6.25" dual DSQD								
Disk Drives	\$277	\$280					\$220	
1.25" dual DSDD								
Disk Drives	\$255		\$220				\$280	
Dual 3.5"			\$970				\$300	
QL Epson Printer							\$170	
Centronics P-I/F	\$45		\$45	\$30	\$50		\$50	\$40
Quasar/Quasar				\$200				
JS ROM		\$100					\$30	
QL ROM Cartridge		\$50					\$12	
Battery Time Clock		\$30					\$12	
Micro. case/patches		\$8					\$12	
Cartridge Case	2/71			\$10	\$11			
QL I.C.E. Mass		\$130	\$120		\$110		\$120	\$100
300/1200 Bard	\$140						\$20	\$45
Modular Software	\$48	\$50	\$50	\$50	\$50		\$50	\$50
Package of above two	\$190						\$50	\$50
300 Bard Modem							\$100	\$100
300 " " with adapter							\$100	\$100
1200 Bard Smart Mod.							\$200	\$200
" " " "								
with adapt. & software								

Business

	A	B	C	D	E	F	G	H
TAX-I-QL(1980)	\$113							
QL Entrepr.	\$40	\$40	\$30	\$30	\$28	\$28	\$40	\$41
QL Project Plan.	\$40	\$40	\$30	\$30	\$28	\$28	\$40	\$41
QL Decision Mak.	\$40	\$40	\$30	\$30	\$28	\$28	\$40	\$41
LQ Recon	\$25							
QSpell	\$27	\$32	\$33	\$27	\$23	\$25	\$40	\$30
QL Appl. Diary	\$30							
Front Page	\$30	\$30						
Quill v 2.3	\$10	\$10						
Abacus v 2.3	\$10	\$10						
Easel v 2.3	\$10	\$10						
Archive v 2.3	\$10	\$10						
Q-Calculator	\$10	\$10						
Archiver	\$25	\$25	\$150	\$30			\$16	\$30
Integ. Bus. Acctg.							\$30	\$30
Mail Merge	\$25	\$25					\$140	\$30
Sign Designer								
Mailing List								
Stock Control								
Teaprint QL				\$22	\$25		\$25	\$30
Organizer				\$27				\$30

Home and Self-improvement

	A	B	C	D	E	F	G	H
Qmonix Keyboard								
Drill Sargent	\$25							
Touch 'N' Go	\$30							
Typing Tutor					\$25	\$25	\$30	\$25
Morse Code Tutor				\$15	\$17			
QL Gardener				\$20	\$25		\$40	\$25
COSMOS (id. stars)			\$23	\$21	\$25		\$22	\$25
QL Home Finance	\$35				\$25		\$30	\$25
QL Kitchen Aid	\$30							

Languages / Compilers / Assemblers & OS

	A	B	C	D	E	F	G	H
68K/OS								\$150
QL-Assembler		\$46	\$33	\$40	\$46	\$30	\$46	\$50
Metacomco's Assem.	\$95	\$100		\$110			\$120	\$130
" Lattice C							\$90	
CST C								
Metacomco's LISP	\$67	\$70		\$70	\$80		\$80	\$80
" Pascal	Call	\$80		\$85	\$86		\$90	\$100
" BCPL	\$67	\$70		\$70	\$80	\$76	\$80	\$45
Fort-83								
Super Fort	\$42							
Prospero Pascal	\$100							
Prospero Fortran								
F-77	\$100							
APL		\$100		\$110	\$90		\$150	\$80
Supercharge(Basic)	\$67	\$70		\$70			\$90	
Turbo(Basic)	Call	\$80						
Q-Liberator(Basic)								

NEXT MONTH... MORE QL RESOURCES!

Network Information

Timex SIG on CompuServe: Wednesday night, 10:00 PM Eastern time
(Go Club)
QZX BBS: (505) 522-7081 FIDO net 15, node 6
--- East coast: (703) 547-4815 FIDO net 18, node 9

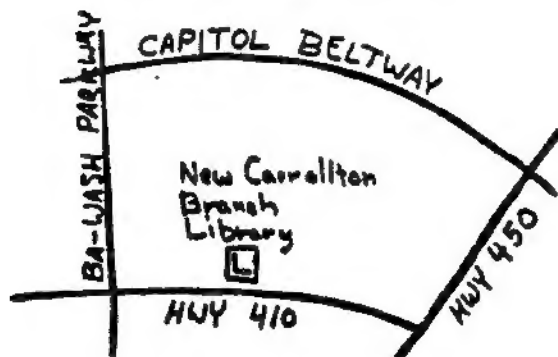
Monthly meetings are held from 12:00 to 5:00, at the second
Saturday of each month in the large meeting room of the New
Carrollton Branch Public Library.

The official contact person for CATS is TOM BENT:
(301) 730-7187

The Capitol Area Timex/Sinclair User's Group (CATS) is a
non-profit special interest organization dedicated to serving
the interests on those who own, use or are interested in
learning more about the Timex/Sinclair family of personal
computers.

Club Information

CATS Newsletter
P.O. Box 725
Bladensburg MD 20710



COME TO OUR MEETING!

The next meeting of C.A.T.S. will be held on:

Saturday, April 11 1987

12:00 PM Hardware Meeting
2:00 PM General Meeting

At: New Carrollton Public Library
7414 Riverdale Road (Hwy 410), New Carrollton, MD

IF YOU ARE NOT A MEMBER OF CATS, THIS IS THE ONLY ISSUE YOU WILL RECIEVE

Dues = \$18.00 per year, per family.

First Class